

WHAT IS CLAIMED IS:

- 1           1.     An inhalation device to deliver a pre-selected dose of  
2 medication to a user, the inhalation device comprising:  
3                 an enclosure having an inhalation tube, the inhalation tube  
4 having an inlet end and an outlet end;  
5                 a medication dispenser coupled to the enclosure, with the  
6 dispenser in communication with the inhalation tube;  
7                 a sensor mounted in the enclosure with at least a portion  
8 extending into the inhalation tube, the sensor having a characteristic of  
9 bending in proportion to speed of gas flowing in a given direction within  
10 the inhalation tube; and  
11                an electrical circuit coupled to the sensor and medication  
12 dispenser, with the electrical circuit configured to trigger the medication  
13 dispenser, upon receipt of a signal from the sensor at a predetermined gas  
14 flow speed in the inhalation tube, wherein a dose of medication is  
15 expelled into the inhalation tube.
- 1           2.     The inhalation device of claim 1, including a medication  
2 reservoir coupled to the medication dispenser.
- 1           3.     The inhalation device of claim 1, including a thermal  
2 compensator mounted in the enclosure with at least a portion extending  
3 into the inhalation tube and coupled to the electrical circuit to sense  
4 temperature and humidity of gas flowing in the inhalation tube.
- 1           4.     The inhalation device of claim 3, wherein the thermal  
2 compensator is positioned between the input end of the inhalation tube  
3 and the sensor.

1           5.     The inhalation device of claim 1, wherein the medication  
2     dispenser is positioned between the output end of the inhalation tube and  
3     the sensor.

1           6.     The inhalation device of claim 1, including one of a  
2     disposable medication reservoir and a refillable medication reservoir  
3     mounted in the enclosure and fluidly coupled to the medication dispenser.

1           7.     The inhalation device of claim 1, wherein the electrical circuit  
2     is mounted in the enclosure.

1           8.     The inhalation device of claim 1, wherein the medication is  
2     one of a powder and a liquid.

1           9.     The inhalation device of claim 1, including an indicator  
2     coupled to the electrical circuit to indicate that medication has been  
3     delivered.

1           10.    The inhalation device of claim 1, wherein the sensor  
2     responds only during an intake of gas by the user of the inhalation device.

1           11.    The inhalation device of claim 10, wherein the gas is moved  
2     through the inhalation tube by a means for pumping gas.

1           12.    The inhalation device of claim 1, wherein the sensor is a  
2     variable resistor.

1           13.    The inhalation device of claim 1, wherein the electrical  
2     circuit, the sensor and the medication dispenser are coupled to a direct  
3     current power source.

1           14.    The inhalation device of claim 1, wherein the user is a human  
2     being.

1           15.    The inhalation device of claim 1, including a means for  
2    calibrating the electrical circuit.

1           16.    The inhalation device of claim 1, including a communication  
2    module coupled to the electrical circuit for cataloging, transmitting, store  
3    and receiving data and instructions.

1           17.    An inhalation device to deliver a pre-selected dose of  
2    medication to a user, the inhalation device comprising:  
3                    an enclosure having an inhalation tube, the inhalation tube  
4    having an inlet end and an outlet end;  
5                    a medication dispenser coupled to the enclosure and in  
6    communication with the inhalation tube;  
7                    a sensor mounted in the enclosure with at least a portion  
8    extending into the inhalation tube, the sensor having a characteristic of  
9    bending in proportion to speed of gas flowing in a given direction within  
10   the inhalation tube;  
11                   an electrical circuit coupled to the sensor and medication  
12   dispenser; and  
13                   a thermal compensator mounted in the enclosure with at  
14   least a portion extending into the inhalation tube and coupled to the  
15   electrical circuit to sense temperature and humidity of gas flowing in the  
16   inhalation tube, with the electrical circuit configured to trigger the  
17   medication dispenser upon receipt of a signal from the sensor at a  
18   predetermined gas flow speed has been reached in the inhalation tube,  
19   wherein a dose of medication is expelled into the inhalation tube .

1           18.    The inhalation device of claim 17, including a medication  
2    reservoir coupled to the medication dispenser.

1            19.    The inhalation device of claim 17, wherein the thermal  
2    compensator is positioned between the input end of the inhalation tube  
3    and the sensor.

1            20.    The inhalation device of claim 17, wherein the medication  
2    dispenser is positioned between the output end of the inhalation tube and  
3    the sensor.

1            21.    The inhalation device of claim 17, including one of a  
2    disposable medication reservoir and a refillable medication reservoir  
3    mounted in the enclosure and fluidly coupled to the medication dispenser.

1            22.    The inhalation device of claim 17, wherein the electrical  
2    circuit is mounted in the enclosure.

1            23.    The inhalation device of claim 17, wherein the medication is  
2    one of a powder and a liquid.

1            24.    The inhalation device of claim 17, including an indicator  
2    coupled to the electrical circuit to indicate that medication has been  
3    delivered.

1            25.    The inhalation device of claim 17, wherein the sensor  
2    responds only during an intake of gas by the user of the inhalation device.

1            26.    The inhalation device of claim 25, wherein the gas is moved  
2    through the inhalation tube by a means for pumping gas.

1            27.    The inhalation device of claim 17, wherein the sensor is a  
2    variable resistor.

1           28.    The inhalation device of claim 17, wherein the electrical  
2   circuit, the sensor and the medication dispenser are coupled to a direct  
3   current power source.

1           29.    The inhalation device of claim 17, wherein the user is a  
2   human being.

1           30.    The inhalation device of claim 17, including a means for  
2   calibrating the electrical circuit.

1           31.    The inhalation device of claim 17, including a communication  
2   module coupled to the electrical circuit for cataloging, transmitting, store  
3   and receiving data and instructions.

1           32.    A method of medication delivery, the method comprising the  
2   steps of:

3                   providing an inhalation device having an inhalation tube;

4                   mounting a sensor in the inhalation device with at least a  
5   portion of the sensor extending into the inhalation tube, the sensor having  
6   a characteristic of bending in proportion to speed of gas flowing in a given  
7   direction within the inhalation tube;

8                   mounting a medication dispenser in the inhalation device, the  
9   dispenser in communication with the inhalation tube;

10                  mounting an electrical circuit in the inhalation device and  
11   coupling the circuit to the sensor and medication dispenser;

12                  configuring the electrical circuit to trigger the medication  
13   dispenser upon receipt of a signal from the sensor at a predetermined gas  
14   flow speed in the inhalation tube; and

15                  expelling a dose of the medication into the inhalation tube in  
16   response to the signal.

1           33. The method of claim 32, including the steps of mounting a  
2 thermal compensator in the inhalation device with at least a portion  
3 extending into the inhalation tube and coupling the thermal compensator  
4 to the electrical circuit to sense temperature and humidity of gas flowing  
5 in the inhalation tube.

1           34. The method of claim 32 including the step of coupling a  
2 medication reservoir to the medication dispenser.

1           35. The method of claim 32 including the steps of providing a  
2 communication module coupled to the electrical circuit and using the  
3 communication module to catalog, transmit, store and receive data and  
4 instructions.

1           36. The method of claim 32, including the step of calibrating the  
2 electric circuit to trigger the medication at the predetermined gas flow  
3 speed.